

REMARKS

Reconsideration of this application as amended is respectfully requested.

THE REJECTION UNDER 35 USC 101

Claims 2-13 were rejected under 35 USC 101 as being directed to non-statutory subject matter. Specifically, on page 3 of the Office Action the Examiner asserts that "While the method presented may provide useful and concrete results, no tangible result is provided." And at the bottom of page 7 of the Office Action, in the Response to Arguments, the Examiner asserts that the output of a manufacturing process comprising a list of manufacturing series activities is abstract absent an implementation of the manufacturing process.

It is respectfully pointed out, however, that the output produced by claim 1 of the primary reference (USP 6,198,980) cited by the Examiner itself is only a "computerized design" of a demand-flow mixed-model manufacturing line. The Examiner's rejection of the claims 2-13 of the present application under 35 USC 101 is therefore respectfully traversed.

Nevertheless, in order to expedite prosecution of the present application, independent claim 6 has been amended to recite not only a step of deriving a manufacturing process for a particular product, but also a step of producing the particular product in accordance with the derived manufacturing process.

Accordingly, it is respectfully submitted that amended independent claim 6 now clearly recites a useful, concrete and tangible result - i.e., the production of the particular product.

Thus, it is respectfully submitted that amended independent claim 6 and each of claims 2-5 and 7-13 depending therefrom all recite statutory subject matter under 35 USC 101, and it is respectfully requested that the rejection thereunder be withdrawn.

THE REJECTION UNDER 35 USC 112, first paragraph

Claims 2-13 were rejected under 35 USC 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to make and/or use the invention. This rejection, however, is respectfully traversed.

With respect to claim 6, it is pointed out that the steps of defining a series product, defining products by a collection of values of attributes of use, and setting manufacturing series activities for achieving particular values of the attributes of use are described in the specification at page 15, line 10 through page 17, line 16, wherein it is described how the objects are defined and set in a database. Basically, the method is shown in the conceptual object model of Fig. 5.

In addition, it is also pointed out that Fig. 1 shows an instance diagram of an example that is defined by the conceptual

object model of Fig. 5. An example of a series product and products defined by a collection of values of attributes of use are described at page 7, line 22 to page 8, line 5. And an example of the relationship between them and series activities is described in the specification at page 9, line 3 through page 10, line 2.

Accordingly, it is respectfully submitted that an engineer of ordinary skill in the art of Object-Oriented Engineering and/or Manufacturing Management would be enabled to effect the method of the present invention recited in claim 6 to actually make a product, based on the conceptual object model shown in Fig. 6 and the instance diagram of Fig. 1 and the corresponding descriptions thereof in the specification.

With respect to claim 7, moreover, it is pointed out that the recitation therein that the manufacturing process is derived using a default valued when at least one of the attribute values of the product is left undetermined is supported by the disclosure in the specification at page 14, lines 14-22. And it is respectfully submitted that a computer software engineer of ordinary skill in the art would be enabled to effect the method recited in claim 7.

With respect to claim 10, it is pointed out that the recitation of deriving a manufacturing process for a new product from parts used in the series activities is supported by the

disclosure in the specification at page 14, line 23 to page 15, line 9. In particular, at page 15, lines 4-6 it is disclosed that "a manufacturing process of a product is derived from attribute values and activities for materializing the same, and component parts are obtained." In this connection, it is noted that a new product is the result of the combination of attribute values whose combination has not been made before. In other words, a manufacturing process is derived from the combination of the attribute values. And it is therefore respectfully submitted that the recitation in claim 10 is fully enabled by the disclosure in the specification.

And with respect to claim 12, it is pointed out that the recitation that works-in-process produced by the series activities are automatically synthesized is supported by the disclosure in the specification at page 10, lines 14-19. This description in the specification discloses that a work-in-process may be synthesized (represented) by the combination of a series product and an activity, without registering each work-in-process (in a database), in accordance with engineering data constructed as according to the claimed present invention. It is therefore respectfully submitted that the recitation in claim 12 is also fully enabled by the disclosure in the specification.

In view of the foregoing, it is respectfully requested that the rejection under 35 USC 112, first paragraph, be withdrawn.

THE REJECTION UNDER 35 USC 112, second paragraph

Claims 10, 11 and 13 were rejected under 35 USC 112, second paragraph, as being indefinite.

With respect to the rejection of claims 10 and 13, it is respectfully pointed out that each of these claims clearly recites the combination of the method of claim 6 and the further method steps respectively recited therein. And it is respectfully submitted that this is clear because claim 6 recites "A method" and claims 10 and 13 each recite "The method according to claim 6, further comprising" (emphasis added). Accordingly, it is respectfully requested that the rejection of claims 10 and 13 under 35 USC 112, second paragraph, be withdrawn.

With respect to the rejection of claim 11, moreover, this claim has been amended to recite that the works-in-process produced by the series activities are not registered in a database. Accordingly, it is respectfully requested that the rejection of claim 11 under 35 USC 112, second paragraph, also be withdrawn.

THE PRIOR ART REJECTIONS

Claims 2, 4, 6, 9, 10, 13 (and claim 8?) were rejected under 35 USC 102(e) as being anticipated by USP 6,198,980 ("Costanza"); claims 3 and 5 were rejected under 35 USC 103 as being obvious in view of Costanza; and claim 7 was rejected under 35 USC 103

as being obvious in view of the combination of Costanza and USP 6,128,542 ("Kristoff et al"). These rejections, however, are respectfully traversed.

According to the method of the present invention as recited in independent claim 6, a set of products having a collection of attributes of use which are arbitrarily predetermined is defined as a series product. Each product contained in said series product is defined by a collection of values of said attributes of use. Manufacturing series activities for achieving particular values of the individual attributes of use are set. A manufacturing process for a particular product of the series product is derived by arranging said manufacturing series activities in a prescribed sequence. And then the particular product is produced in accordance with the derived manufacturing process.

By contrast, it is respectfully submitted that Costanza does not at all disclose, teach or suggest defining a series product having a collection of attributes of use, as according to the method of the present invention as recited in claim 6. At column 6, line 58 of Costanza, a "family of products" is defined, but it is respectfully pointed out that the definition provided by Costanza is merely that a family of products is a grouping of products based on a common feature. Costanza, however, does not at all disclose, teach or suggest that a collection of attributes

of use may be used to identify (define) a product in the "family of products" thereof, in the manner of the present invention as recited in claim 6. In this connection, moreover, it is respectfully pointed out that according to the method of the present invention as recited in claim 6, the manufacturing series activities, manufacturing process for a particular product, and the actual production of the product are all derived only once the attributes of use are determined. In this respect, it is respectfully submitted that the method of the present invention as recited in claim 6 entirely differs from the teachings of Costanza.

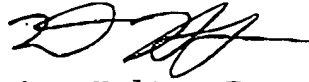
In view of the foregoing, it is respectfully submitted that the present invention as recited in claim 6 and each of claims 2-5 and 7-13 depending therefrom patentably distinguishes over Costanza, taken singly or in combination with any of the other prior art references of record, including Kristoff et al, under 35 USC 102 as well as under 35 USC 103.

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Entry of this Amendment, allowance of the claims and the passing of this application to issue are respectfully solicited.

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

Respectfully submitted,



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